

				<b>DART+ WEST - MCA Stage 2</b>			
				<b>Ashtown Level Crossing Assessment</b>			
	<b>Parameter</b>	<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 4 &amp; 4b (Road bridge West + PedCycOvBridge)</b>	<b>Option 10 (UnBridge West of Mill, PedOvBridge at Station)</b>	<b>Option 11 (Improvements on Local Road Network, PedOvBridge at Station)</b>	
				<p><b>Roadbridge at Navan Parkway with link to River Road, Selected upgrade works to River Road as far as Ashtown, Pedestrian and cycle overbridge at Ashtown.</b> This option is located approximately 1km to the west of the existing level crossing at Ashtown at the grade separated junction on the Navan Road serving Phoenix Park Railway Station. At this location there is scope to construct a new road link over the canal and railway to link to River Road. This could either descend to lie into River Road or be designed to pass over it to cross the Tolka River and facilitate an onward connection to the Dunsink lands. In the latter case, a short spur would be provided to link to River Road which would need upgrade as far as Ashtown. In both cases this option would involve some vehicular traffic diversion and land acquisition. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides. Short term connection to River road is likely to be in the form of a mini roundabout. River road would require upgrade to Ashtown with a new footpath constructed along the northern boundary of the road and requiring the removal of the associated boundary treatment – walls, trees, brush.</p> <p>The road would be at a similar level as the existing junction Phoenix Park crossing the rail at a level of approximately 55.4m OD Malin Head before descending to tie into the level of the River Road at a level of 34.7m. The road on the northern side would be at a gradient of approximately 6% over 300m if permitted to follow a meandering route.</p> <p>It includes the demolition of the existing cable stayed footbridge at the level crossing and the existing station footprint to provide space for a proposed pedestrian cycle overbridge. The rail level at the crossing is approximately 42.1m OD Malin Head, and the canal at 39.3m with the bridge level over the railway at 50.00m. The ramps on either side of the bridge will not exceed 5% gradient. Separate pedestrian stairs could be provided with this option as well to ease pedestrian access and rails for pushing cycle on if required.</p>	<p>Road and cycleway bridge under Railway and Canal West of the Mill and linking to Mill Lane at each end. This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the west and a 3.85m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 36.2m OD Malin Head, under the rail which is at a level of 45.6m at the crossing point.</p> <p>It is proposed to construct a pedestrian cycle bridge at the train station. The bridge will cater for disabled and mobility impaired users.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station. It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footprint of the existing train station. This will require reconstruction of the train station.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p>This option includes the provision of a <b>new pedestrian and cycle overbridge at the location of the train station and local road improvements.</b> The bridge would provide for disabled and mobility impaired users. The arrangement of the bridge would utilise nested ramps parallel to and over the station platforms rising to the east before turning perpendicular to the track to cross the railway. This option requires reconstruction and reconfiguration of the train station under the footprint of the proposed footbridge.</p> <p>The rail level at the crossing is approximately 42.1m to OD Malin Head and the canal water level is approximately 39.3m. The walking surface on the proposed bridge over the railway rises to a level of approximately 50.0m. The proposed parapets will be approximately 1.35m high remote from the railway and 1.85m high over and adjacent to the live railway. The ramps on either side of the bridge would not exceed 5% gradient and landings are proposed at 10m centres.</p> <p>Separate pedestrian stairs are proposed to be provided with this option also to provide for direct pedestrian access and rails for pushing bicycles could be installed if required.</p> <p>Constraints on a bridge crossing here include the train station, the Royal Canal, the listed railway structures, and the canal bridge.</p> <p>This option provides for motorised traffic to be diverted along the local road network. Upgrades will be necessary to River Road with the construction of a 2.0m pedestrian way along the southern edge of the road west of Ashtown and localised improvements to the east. Where this is adjacent to Ashton House it is proposed to run the pedestrian way along the northern boundary of the road due to the protected status of the property. It would be necessary to provide public lighting along the pedestrian way. It is also proposed to carry out small scale improvement works to junctions along Ratoath Road between river road and the Navan Road. These improvements will include the implementation of signal control on the junction of River Road and the Ratoath Road.</p>	
1	Economy	1.1	Construction and Land Cost	<p>Assessment of cost of construction of option, land costs, acquisition costs and temporary works</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>Some realignment and improvement works required on River Road. A two or three span bridge configuration is anticipated here requiring construction activity between the canal and the railway. Requires land acquisition in former demense lands north of the railway.</p> <p>The costs for this option includes the fixed pedestrian and cycle bridge over the canal and railway with associated ramps, station alterations, turning facilities and set down facilities, and associated land acquisition costs.</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>Construction cost impacts are high due to direct impacts on canal and existing railway and more difficult construction.</p> <p>The costs for this option includes the fixed pedestrian and cycle bridge over the canal and railway with associated ramps, station alterations, turning facilities and set down facilities, and associated land acquisition costs.</p>	<p><b>Some comparative advantage over other options</b></p> <p>The costs for this option includes the fixed pedestrian and cycle bridge over the canal and railway with associated ramps, station alterations, turning facilities and set down facilities, and associated land acquisition costs. There is no road bridge associated with this option.</p> <p>Upgrades are proposed along the local road network including new footpaths, signalling at the River Road junction with Ratoath Road, shuttle working at locations and improvements on bends.</p>
		1.2	Long Term Maintenance costs	<p>Ongoing annual maintenance costs associated with varied options</p>	<p><b>Some comparative advantage over other options</b></p> <p>Maintenance costs include a Composite Steel Railway and Canal Overbridge, extensive retaining walls and 0.6km of new roadway .</p> <p>It also includes a steel pedestrian/cyclist overbridge at the station .</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>Maintenance costs include a Composite Concrete bridge under Railway and Canal, a single span access bridge over the proposed road and retaining walls along sections of the roadway.</p> <p>It also includes a steel pedestrian/cyclist overbridge at the station .</p>	<p><b>Some comparative advantage over other options</b></p> <p>A pedestrian/cyclist overbridge would require minimal maintenance in short term with regular inspections and remedial works in the long term. The long term maintenance low compared to other options.</p>
		1.3	Traffic Functionality /economic benefit	<p>Benefits to vehicular traffic through reduction in journey time lengths and delays through removal of level crossings. Consideration of potentially longer routes for traffic.</p>	<p><b>Some comparative advantage over other options</b></p> <p>Reduces Traffic in Ashtown village. This option requires vehicles to divert from Ashtown to cross the railway. Reduction in Traffic on R147 and at Ashtown Roundabout. Potential for induced trips along River Road. Cycle, pedestrian, mobility impaired and disabled access proposed at station.</p> <p>Traffic flow of approx 450 in AM peak and 370 in PM peak diverted for approx. Additional Traffic flow Do Something vs Do Minimum, of approx 269 in AM peak and 174 in PM peak. 1.5km minimum diversion. Through traffic diversions small, relates to approx 45% of traffic. Estimated Additional Vehicle km per day = 810</p>	<p><b>Some comparative advantage over other options</b></p> <p>Reduces Traffic in Ashtown village. General reduction in journey times due to removal of level crossing and minimal diversion associated with the option. The route is largely on the desire line of transport customers. Potential for induced trips along River Road. Potential to increase congestion at Ashtown Roundabout and on the R147.</p> <p>General reduction in journey times for pedestrians and cyclists. Baseline traffic flow of approx 450 in AM peak and 370 in PM peak. Additional Traffic flow Do Something vs Do Minimum, of approx 269 in AM peak and 174 in PM peak, 0.1km diversion. Estimated Additional Vehicle km per day = 270</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>Reduces Traffic in Ashtown village. General increase in journey time due to diversion along local road network and the introduction of controlled single lane shuttle running on sections of River Road. Journey time savings for pedestrians and cyclists.</p> <p>Potential for negative impact along diversion routes with up to 2.0mins additional delay at existing junctions.</p> <p>Baseline traffic flow of approx 450 in AM peak and 370 in PM peak. Additional Traffic flow Do Something vs Do Minimum, of approx 269 in AM peak and 174 in PM peak. Two diversion routes available for local traffic, 4.7km and 5.7km. Through traffic diversions small, relates to approx 45% of traffic. Road improvements will ameliorate impact. Estimated Additional Vehicle km per day = 2754</p>

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				<p><b>Road link between Navan Parkway Station and the Road network immediately north of Ashtown Village incorporating a bridge over the railway and canal and a pedestrian cycle bridge over the station in Ashtown.</b> This option would entail re-routing through road traffic away from Ashtown village. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.9m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashton House.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p>	<p><b>Road with cycleway under Railway and Canal West of the Mill and linking to Mill Lane at each end:</b> This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the West and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would rise to an approximate level of 52.5m OD Malin Head over the railway which is at a level of 45.6m. A half through bridge form of construction would be required similar to the adjacent Ratbath Road Bridge.</p> <p>A new mini roundabout is proposed at the junction of Mill Lane and Ashtown Road south of the railway to accommodate traffic interactions.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>This option crosses through the grounds of Ashton House and will require an additional bridge to be constructed over the access road to the house. It is anticipated the proposed roadway would be walled along the extent passing through the estate. The proposal is to tie into the existing roundabout immediately north of Ashtown village. A portion of the boundary wall to Ashton house would need to be demolished to accommodate the link road.</p> <p>This option would require some property acquisition.</p>	
1	Economy	1.1	Construction and Land Cost	<p>Assessment of cost of construction of option, land costs, acquisition costs and temporary works</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>This option requires a crossing of the canal and railway on skew and an extended road alignment through the listed Ashton House property to facilitate a tie in to the north of the canal and railway.</p> <p>The costs for this option includes the fixed pedestrian and cycle bridge over the canal and railway with associated ramps, station alterations, turning facilities and set down facilities, and associated land acquisition.</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>This option requires a crossing of the canal and railway on skew and an extended road alignment through the listed Ashton House property to facilitate a tie in to the north of the canal and railway.</p> <p>The costs for this option includes the fixed pedestrian and cycle bridge over the canal and railway with associated ramps, station alterations, turning facilities and set down facilities, and associated land acquisition.</p>
		1.2	Long Term Maintenance costs	<p>Ongoing annual maintenance costs associated with varied options</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>Maintenance costs include a Composite Steel Railway and Canal Overbridge, a single span bridge for access to Ashton House, extensive retaining walls and 1km of new roadway .</p> <p>It also includes a steel pedestrian/cyclist overbridge at the station .</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>Maintenance costs include a Composite Steel Railway and Canal Overbridge, a single span bridge for access to Ashton House, and extensive retaining walls .</p> <p>It also includes a steel pedestrian/cyclist overbridge at the station .</p>
		1.3	Traffic Functionality /economic benefit	<p>Benefits to vehicular traffic through reduction in journey time lengths and delays through removal of level crossings. Consideration of potentially longer routes for traffic.</p>	<p><b>Some comparative advantage over other options</b></p> <p>Reduces Traffic in Ashtown village.</p> <p>This option requires vehicles to divert from Ashtown to cross the railway.</p> <p>Reduction in Traffic on R147 and at Ashtown Roundabout.</p> <p>Potential for induced trips along River Road.</p> <p>Cycle, pedestrian, mobility impaired and disabled access proposed at station.</p> <p>General reduction in journey times for pedestrians and cyclists.</p> <p>Traffic flow of approx 450 in AM peak and 370 in PM peak diverted for approx. Additional Traffic flow Do Something vs Do Minimum, of approx 269 in AM peak and 174 in PM peak, 1.5km minimum diversion. Through traffic diversions small, relates to approx 45% of traffic. Estimated Additional Vehicle km per day = 810</p>	<p><b>Some comparative advantage over other options</b></p> <p>Reduces Traffic in Ashtown village.</p> <p>General reduction in journey times due to removal of level crossing and minimal diversion associated with the option.</p> <p>The route is largely on the desire line of transport customers.</p> <p>Potential for induced trips along River Road.</p> <p>Potential to increase congestion at Ashtown Roundabout and on the R147.</p> <p>General reduction in journey times for pedestrians and cyclists.</p> <p>Baseline traffic flow of approx 450 in AM peak and 370 in PM peak. Additional Traffic flow Do Something vs Do Minimum, of approx 269 in AM peak and 174 in PM peak, 0.1km diversion. Estimated Additional Vehicle km per day = 270</p>

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				<p><b>Roadbridge at Navan Parkway with link to River Road. Selected upgrade works to River Road as far as Ashtown, Pedestrian and cycle overbridge at Ashtown.</b> This option is located approximately 1km to the west of the existing level crossing at Ashtown at the grade separated junction on the Navan Road serving Phoenix Park Railway Station. At this location there is scope to construct a new road link over the canal and railway to link to River Road. This could either descend to tie into River Road or be designed to pass over it to cross the Tolka River and facilitates an onward connection to the Dunsink lands. In the latter case, a short spur would be provided to link to River Road which would need upgrade as far as Ashtown. In both cases this option would involve some vehicular traffic diversion and land acquisition. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides. Short term connection to River road is likely to be in the form of a mini roundabout. River road would require upgrade to Ashtown with a new footpath constructed along the northern boundary of the road and requiring the removal of the associated boundary treatment – walls, trees, brush.</p> <p>The road would be at a similar level as the existing junction Phoenix Park crossing the rail at a level of approximately 55.4m OD Malin Head before descending to tie into the level of the River Road at a level of 34.7m. The road on the northern side would be at a gradient of approximately 6% over 300m if permitted to follow a meandering route.</p> <p>It includes the demolition of the existing cable stayed footbridge at the level crossing and the existing station footbridge to provide space for a proposed pedestrian cycle overbridge. The rail level at the crossing is approximately 42.1m OD Malin Head, and the canal at 39.3m with the bridge level over the railway at 50.00m. The ramps on either side of the bridge will not exceed 5% gradient. Separate pedestrian stairs could be provided with this option as well to ease pedestrian access and rails for pushing cycle on if required.</p>	<p>Road and cycleway bridge under Railway and Canal West of the Mill and linking to Mill Lane at each end. This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the west and a 3.85m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 36.2m OD Malin Head, under the rail which is at a level of 45.6m at the crossing point.</p> <p>It is proposed to construct a pedestrian cycle bridge at the train station. The bridge will cater for disabled and mobility impaired users.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p>This option includes the provision of a <b>new pedestrian and cycle overbridge at the location of the train station and local road improvements.</b> The bridge would provide for disabled and mobility impaired users. The arrangement of the bridge would utilize nested ramps parallel to and over the station platforms rising to the east before turning perpendicular to the track to cross the railway. This option requires reconstruction and reconfiguration of the train station under the footprint of the proposed footbridge.</p> <p>The rail level at the crossing is approximately 42.1m to OD Malin Head and the canal water level is approximately 39.3m. The walking surface on the proposed bridge over the railway rises to a level of approximately 50.0m. The proposed parapets will be approximately 1.35m high remote from the railway and 1.85m high over and adjacent to the live railway. The ramps on either side of the bridge would not exceed 5% gradient and landings are proposed at 10m centres.</p> <p>Separate pedestrian stairs are proposed to be provided with this option also to provide for direct pedestrian access and rails for pushing bicycles could be installed if required.</p> <p>Constraints on a bridge crossing here include the train station, the Royal Canal, the listed railway structures, and the canal bridge.</p> <p>This option provides for motorised traffic to be diverted along the local road network. Upgrades will be necessary to River Road with the construction of a 2.0m pedestrian way along the southern edge of the road west of Ashtown and localised improvements to the east. Where this is adjacent to Ashon House it is proposed to run the pedestrian way along the northern boundary of the road due to the protected status of the property. It would be necessary to provide public lighting along the pedestrian way. It is also proposed to carry out small scale improvement works to junctions along Ratoath Road between river road and the Navan Road. These improvements will include the implementation of signal control on the junction of River Road and the Ratoath Road.</p>
2	2.1	Transport Integration	Impact on scope for and ease of interchange between modes. Impact on the operation of other transport services both during construction and in operation. New interchange nodes and facilities; Reduced walking and wait times associated with interchanges. Modal shift figures during construction and operations. Changes to journey times to transport nodes.	Some comparative disadvantage over other options	Some comparative advantage over other options	Significant comparative disadvantage over other options
				<p>All options provide access to the proposed greenway along the Royal Canal. Improved interchange between modes due to veh access to PnR.</p> <p>Route encourages customers away from Ashtown.</p> <p>Cycle, pedestrian, mobility impaired and disabled access proposed at station.</p> <p>Cycletrack provided along New roadway, not practicable on River Road.</p>	<p>All options provide access to the proposed greenway along the Royal Canal. This option does not enhance access to the Navan Road Park and Ride facility. General reduction in journey times due to removal of level crossing and minimal diversion associated with the option.</p> <p>The route is largely on the desire line of transport customers.</p> <p>Cycle, pedestrian, mobility impaired and disabled access proposed at station.</p> <p>Cycletrack provided along New roadway.</p>	<p>All options provide access to the proposed greenway along the Royal Canal. This option does not enhance access to the Navan Road Park and Ride facility. This option diverts traffic onto the local road network increasing congestion. Where this arises on River road it is not practicable to provide dedicated facilities for cyclists.</p> <p>Cycle, pedestrian, mobility impaired and disabled access proposed at station.</p> <p>Cycletrack not practicable on River Road.</p>
	2.2	Land Use Integration	Impact on land use strategies and regional and local plans. Assessment of support for land use factors local land use and planning. Inclusion of project in relevant local planning documents.	Significant comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative disadvantage over other options
				<p>At local level, the majority Option 4 is located within lands zoned by Fingal DP as "High Amenity". The route travels close to the boundary of the existing Coolmine Rugby Club and could support Fingal DP local map-based Specific Objective 136 "Facilitate pedestrian access from Coolmine Rugby Club grounds over the Canal adjacent to the Phoenix Park Railway Station" However, the introduction of a new road infrastructure in 'High Amenity' zoned land would go against Objective NH51 (FCDP) "Protect High Amenity areas from inappropriate development and reinforce their character, distinctiveness and sense of place". However, in terms of future land use factors, Option 4 could create a direct link into map based objective LAP13.B - Navan Road Parkway Local Area Plan) and also linking into LAP13.C. Option 4b section would result in a direct pedestrian and cycle access from the station into residential zoned lands associated with Ashtown – Pelletstown LAP 2014. This option has some comparative disadvantage due to the impact on zoned high amenity lands.</p>	<p>Option 10 consists of two structures, an underbridge west of Mill Lane and a pedestrian overbridge at Ashtown Station.</p> <p>At local planning policy level, the extents of the underbridge are primarily located within Fingal CDP area. Lands are zoned for 'High Technology' (to the south of the Canal) and travels north of the canal into the start of a large area of land zoned 'High Amenity'. This option is within the future Navan Road Parkway LAP (map-based objective: LAP 13.B) and is likely to support overall land use and transport planning integration. Subject to further design and traffic data, Northern extents of Option 10 are located within High Amenity lands however, for most part the option follows the existing road network which would reduce its impact on this land use. Road works proposed as part of Option 10 are also located within a small section of Dublin CDP area zoned for Z9 (Amenity, Open Space, Green Network).</p> <p>The pedestrian and cyclist overbridge is located entirely within the Dublin CDP area. The bridge is located within lands zoned for Z9 (Amenity, Open Space, Green Network) and Z11 (canal, coastal and river amenities) associated with the Royal Canal. The overbridge will provide an improved walking and cycling access into the Village Centre.</p>	<p>Option 11 is within Dublin CDP and Fingal CDP areas. This option will sever vehicular access over the canal and railway at Ashtown</p> <p>The road upgrade works are confined largely to the footprint of the existing road, however widening works will be required into lands zoned Z9 (Amenity, Open Space, Green Network) under the Dublin CDP and lands zoned 'High Amenity' under Fingal CDP. The improvement works proposed as part of Option 11 support the realisation of Objective MTO31 of the Dublin CDP to "To initiate and/or implement the following road improvement schemes and bridges" which lists River Road as one of the roads to be improved. The pedestrian and cyclist overbridge is located entirely within the Dublin CDP area. The bridge is located within lands zoned for Z9 (Amenity, Open Space, Green Network) and Z11 (canal, coastal and river amenities) associated with the Royal Canal.</p> <p>Although Option 11 maintains pedestrian and cyclist access at Ashtown Station, vehicular connectivity to existing and future developments will be impacted. The DARTS includes an objective to enhance linkages to planned developments. The Ashtown and Pelletstown LAP and FCC Development Plan also includes an objectives to maintain access routes in the area.</p>
2.3	Geographical Integration	Alternative level crossing options are mostly neutral in respect of Geographical Integration due to localised nature of the level crossings.	Comparable to other options	Comparable to other options	Comparable to other options	
			No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.	
2.4	Other Government Policy Integration	Integration with the other Government policy such as the NPF and RSES.	Comparable to other options	Comparable to other options	Comparable to other options	
			This option supports the delivery of the higher level national and regional planning policies regarding the DART + programme (NPF, RSES, GDA Transport Strategy).	This option supports the delivery of the higher level national and regional planning policies regarding the DART + programme (NPF, RSES, GDA Transport Strategy).	This option supports the delivery of the higher level national and regional planning policies regarding the DART + programme (NPF, RSES, GDA Transport Strategy).	

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	<b>Parameter</b>	<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 12 (Road OvBridge West from Navan Parkway Stn, PedCycOvBridge at Ashtown Station)</b>	<b>Option 13 (OvrBridge West of Mill, PedOvBridge at Station)</b>	
				<p><b>Road link between Navan Parkway Station and the Road network immediately north of Ashtown Village incorporating a bridge over the railway and canal and a pedestrian cycle bridge over the station in Ashtown.</b> This option would entail re-routing through road traffic away from Ashtown village. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.9m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashton House.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p>	<p><b>Road with cycleway under Railway and Canal West of the Mill and linking to Mill Lane at each end:</b> This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the West and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would rise to an approximate level of 52.5m OD Malin Head over the railway which is at a level of 45.6m. A half through bridge form of construction would be required similar to the adjacent Ratoath Road Bridge.</p> <p>A new mini roundabout is proposed at the junction of Mill Lane and Ashtown Road south of the railway to accommodate traffic interactions.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>This option crosses through the grounds of Ashton House and will require an additional bridge to be constructed over the access road to the house. It is anticipated the proposed roadway would be walled along the extent passing through the estate. The proposal is to tie into the existing roundabout immediately north of Ashtown village. A portion of the boundary wall to Ashton house would need to be demolished to accommodate the link road.</p> <p>This option would require some property acquisition.</p>	
2	Integration	2.1	Transport Integration	<p>Impact on scope for and ease of interchange between modes. Impact on the operation of other transport services both during construction and in operation. New interchange nodes and facilities; Reduced walking and wait times associated with interchanges. Modal shift figures during construction and operations. Changes to journey times to transport nodes.</p>	<p><b>Significant comparative advantage over other options</b></p> <p>All options provide access to the proposed greenway along the Royal Canal. Improved interchange between modes due to veh access to PrR, encouraging customers away from Ashtown.</p> <p>Provides direct link into Ashtown whereas Option 4+4b does not.</p> <p>Cycle, pedestrian, mobility impaired and disabled access proposed at station.</p> <p>Cycletrack provided along New roadway linking to Ashtown.</p>	<p><b>Some comparative advantage over other options</b></p> <p>All options provide access to the proposed greenway along the Royal Canal. This option does not enhance access to the Navan Road Park and Ride facility. General reduction in journey times due to removal of level crossing and minimal diversion associated with the option.</p> <p>The route is largely on the desire line of transport customers.</p> <p>Cycle, pedestrian, mobility impaired and disabled access proposed at station.</p> <p>Cycletrack provided along New roadway, not practicable on River Road.</p>
		2.2	Land Use Integration	<p>Impact on land use strategies and regional and local plans. Assessment of support for land use factors local land use and planning. Inclusion of project in relevant local planning documents.</p>	<p><b>Significant comparative disadvantage over other options</b></p> <p>Option 12 consists of two structures, a vehicular overbridge from Navan Road Parkway station connecting to Ashtown Village Centre and a pedestrian overbridge at Ashtown Station.</p> <p>At local planning policy level, the vehicular overbridge are located within Fingal CDP area. Lands are zoned for 'High Technology' (to the south of the Canal) and travel north of the canal into the start of a large area of land zoned 'High Amenity'. The introduction of a new overbridge in a High Amenity area would not work towards 'Objective NHS1' (FCDF) "Protect High Amenity areas from inappropriate development and reinforce their character, distinctiveness and sense of place". Option 12 crosses through the middle of lands zoned for 'High Amenity' and would have a greater impact on its land use zoning objective when compared to Options 2 and 3. Extents of the option to the south of the Royal Canal are within undeveloped lands zoned for development under future Navan Road Parkway LAP (map-based objective: LAP 13.B). Option 12 may reduce the area of land to be developed as part of the LAP but will likely to support overall land use and transport planning integration. Subject to further design and traffic data.</p> <p>The pedestrian and cyclist overbridge is located entirely within the Dublin CDP area. The bridge is located within lands zoned for Z9 (Amenity, Open Space, Green Network) and Z11 (canal, coastal and river amenities) associated with the Royal Canal. The overbridge will provide an improved walking and cycling access into the Village Centre.</p>	<p><b>Significant comparative advantage over other options</b></p> <p>Option 13 consists of two structures, an all-user overbridge west of Mill Lane and a pedestrian overbridge at Ashtown Station.</p> <p>At local planning policy level, the overbridge is located within Fingal CDP area. Lands are zoned for 'High Technology' (to the south of the Canal) and travel north of the canal into the start of a large area of land zoned 'High Amenity'. The introduction of a new overbridge in a High Amenity area would not work towards 'Objective NHS1' (FCDF) "Protect High Amenity areas from inappropriate development and reinforce their character, distinctiveness and sense of place". Option 13 crosses through the middle of lands zoned for 'High Amenity' and would have a greater impact on its land use zoning objective when compared to Options 2 and 3. This option is within the future Navan Road Parkway LAP (map-based objective: LAP 13.B) and is likely to support overall land use and transport planning integration. Subject to further design and traffic data.</p> <p>The pedestrian and cyclist overbridge is located entirely within the Dublin CDP area. The bridge is located within lands zoned for Z9 (Amenity, Open Space, Green Network) and Z11 (canal, coastal and river amenities) associated with the Royal Canal. The overbridge will provide an improved walking and cycling access into the Village Centre.</p>
		2.3	Geographical Integration	<p>Alternative level crossing options are mostly neutral in respect of Geographical Integration due to localised nature of the level crossings.</p>	<p><b>Comparable to other options</b></p> <p>No significant effect on geographical integration.</p>	<p><b>Comparable to other options</b></p> <p>No significant effect on geographical integration.</p>
		2.4	Other Government Policy Integration	<p>Integration with the other Government policy such as the NPF and RSES.</p>	<p><b>Comparable to other options</b></p> <p>This option supports the delivery of the higher level national and regional planning policies regarding the DART + programme (NPF, RSES, GDA Transport Strategy).</p>	<p><b>Comparable to other options</b></p> <p>This option supports the delivery of the higher level national and regional planning policies regarding the DART + programme (NPF, RSES, GDA Transport Strategy).</p>

				<b>DART+ WEST - MCA Stage 2</b>		
				<b>Ashtown Level Crossing Assessment</b>		
	<b>Parameter</b>	<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 4 &amp; 4b (Road bridge West + PedCycOvBridge)</b>	<b>Option 10 (UnBridge West of Mill, PedOvBridge at Station)</b>	<b>Option 11 (Improvements on Local Road Network, PedOvBridge at Station)</b>
				<p><b>Roadbridge at Navan Parkway with link to River Road, Selected upgrade works to River Road as far as Ashtown, Pedestrian and cycle overbridge at Ashtown.</b> This option is located approximately 1km to the west of the existing level crossing at Ashtown at the grade separated junction on the Navan Road serving Phoenix Park Railway Station. At this location there is scope to construct a new road link over the canal and railway to link to River Road. This could either descend to tie into River Road or be designed to pass over it to cross the Tolka River and facilitate an onward connection to the Dunsink lands. In the latter case, a short spur would be provided to link to River Road which would need upgrade as far as Ashtown. In both cases this option would involve some vehicular traffic diversion and land acquisition. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides. Short term connection to River road is likely to be in the form of a mini roundabout. River road would require upgrade to Ashtown with a new footpath constructed along the northern boundary of the road and requiring the removal of the associated boundary treatment - walls, trees, brush.</p> <p>The road would be at a similar level as the existing junction Phoenix Park crossing the rail at a level of approximately 55.4m OD Malin Head before descending to tie into the level of the River Road at a level of 54.7m. The road on the northern side would be at a gradient of approximately 6% over 300m if permitted to follow a meandering route.</p> <p>It includes the demolition of the existing cable stayed footbridge at the level crossing and the existing station footbridge to provide space for a proposed pedestrian cycle overbridge. The rail level at the crossing is approximately 42.1m OD Malin Head, and the canal at 39.3m with the bridge level over the railway at 50.00m. The ramps on either side of the bridge will not exceed 5% gradient. Separate pedestrian stairs could be provided with this option as well as ease pedestrian access and rails for pushing cycle on if required.</p>	<p>Road and cycleway bridge under Railway and Canal West of the Mill and linking to Mill Lane at each end. This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the west and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 36.2m OD Malin Head, under the rail which is at a level of 45.6m at the crossing point.</p> <p>It is proposed to construct a pedestrian cycle bridge at the train station. The bridge will cater for disabled and mobility impaired users.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p>This option includes the provision of a <b>new pedestrian and cycle overbridge at the location of the train station and local road improvements.</b> The bridge would provide for disabled and mobility impaired users. The arrangement of the bridge would utilise stepped ramps parallel to and over the station platforms rising to the east before turning perpendicular to the track to cross the railway. This option requires reconstruction and reconfiguration of the train station under the footprint of the proposed footbridge.</p> <p>The rail level at the crossing is approximately 42.1m to OD Malin Head and the canal water level is approximately 39.3m. The walking surface on the proposed bridge over the railway rises to a level of approximately 50.0m. The proposed parapets will be approximately 1.35m high remote from the railway and 1.85m high over and adjacent to the live railway. The ramps on either side of the bridge would not exceed 5% gradient and landings are proposed at 10m centres.</p> <p>Separate pedestrian stairs are proposed to be provided with this option also to provide for direct pedestrian access and rails for pushing bicycles could be installed if required.</p> <p>Constraints on a bridge crossing here include the train station, the Royal Canal, the listed railway structures, and the canal bridge.</p> <p>This option provides for motorised traffic to be diverted along the local road network. Upgrades will be necessary to River Road with the construction of a 2.0m pedestrian way along the southern edge of the road west of Ashtown and localised improvements to the east. Where this is adjacent to Ashtown House it is proposed to run the pedestrian way along the northern boundary of the road due to the protected status of the property. It would be necessary to provide public lighting along the pedestrian way. It is also proposed to carry out small scale improvement works to junctions along Ratoath Road between river road and the Navan Road. These improvements will include the implementation of signal control on the junction of River Road and the Ratoath Road.</p>
<b>Environment</b>	3.1	<b>Noise and Vibration</b>	Estimated number of sensitive properties within 100m of the works. Options closer to more sensitive locations will have an increased risk of generating a noise impact. However, qualitative criteria are also used where necessary to differentiate between the options.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
			Operational traffic impact only affects 2 dwellings. Pedestrian crossing will have impacts during construction. 248 dwellings within 100m of both vehicular route and pedestrian crossing. 2 properties within 100m of the vehicular route.	Moves traffic to rear of apt block from current road layout. This option will introduce additional noise to the rear apartments while also decreasing road traffic noise levels to the apartments currently facing the front of the apartment block. Construction phase of this option will be more significant due to the excavation required. 206 properties within 100m.	The pedestrian bridge and station upgrades will have some impacts during construction. 673 dwellings within 100m of both vehicular route and pedestrian crossing, however, this option is expected to reduce noise impacts within Ashtown and is expected to result in small scale change in noise levels elsewhere due to traffic redistribution during the operational phase.	
			Estimated number of receptors within 50m reviewed as part of appraisal. Options closer to more sensitive locations will have an increased risk of changes in air quality during construction or operational phases. However, qualitative criteria are also used where necessary to differentiate between the options.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
	3.2	<b>Air Quality and Climate</b>	Estimated number of receptors within 50m reviewed as part of appraisal. Options closer to more sensitive locations will have an increased risk of changes in air quality during construction or operational phases. However, qualitative criteria are also used where necessary to differentiate between the options.	Pedestrian cycle bridge and station reconstruction will have minor impacts during construction for all options. 32 dwellings within 50m of pedestrian crossing. Only 1 property within 50m of the vehicular route of operational traffic.	Pedestrian cycle bridge and station reconstruction will have minor impacts during construction for all options. Moves traffic to rear of apt block from current road layout. 117 dwellings within 50m where traffic has been moved from front to back.	Pedestrian cycle bridge and station reconstruction will have minor impacts during construction for all options. 158 dwellings within 50m of both vehicular route and pedestrian crossing.
			Long structure crossing the railway and canal will increase embodied carbon for this option but it will be less than options 10, 12 and 13. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	The embodied carbon associated with the bridges and retaining walls is more significant for this option than for other options. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	This option performs best in respect of embodied carbon as it requires fewer structures and much of the roadworks is on-line. This option is expected to reduce air emission impacts within Ashtown.	
			Some comparative disadvantage over other options	Significant comparative advantage over other options	Some comparative advantage over other options	
3.3	<b>Landscape and Visual (including light)</b>	Key landscape characteristics affected; Impact on landscape character; Impacts on landscape features, protected landscapes. Key visual characteristics affected; Impacts on properties, amenities, protected views, key views.	The pedestrian cycle bridge is common to all options and overswings the canal in a visually incongruous manner. Pedestrian/cycle bridge will have a significant impact on trees/hedges along the royal canal.	The pedestrian cycle bridge is common to all options and overswings the canal in a visually incongruous manner. Pedestrian/cycle bridge will have a significant impact on trees/hedges along the royal canal.	The pedestrian cycle bridge is common to all options and overswings the canal in a visually incongruous manner. Pedestrian/cycle bridge will have a significant impact on trees/hedges along the royal canal.	
		Alignment will have a very significant impact on the landscape character and structure, trees and woodlands of lands between Ashtown Lodge (and its associated lodge) and Coolmine Rugby Club. Alignment will impact existing landscape character of River Road and lands north to the Tolka River. The majority of the lands are laid out in mature parkland with trees, walks, and boundary woodland - all of which will be impacted by the alignment. The lands and the corridor of the Royal Canal are zoned High Amenity and identified as a Nature Development Area in the Fingal Development Plan. Tree and Woodland preservation objectives in Fingal Development Plan apply to the lands.	Option will have a very significant impact on boundary trees/woodlands, entrance gates and lodge at Ashtown (Ashtown) House, a protected structure (No. 690). Lands of Ashtown House and the corridor of the Royal Canal west of Longford Bridge are zoned High Amenity and identified as a Nature Development Area in the Fingal Development Plan. Option underpass canal, which reduces landscape and visual impact on canal corridor. Moderate visual impact for setting of 10th Lock on Royal Canal and for mill buildings south of canal. Moderate impact due to removal of roadside tree-lined hedges leading to railway.	Royal canal corridor is identified as a conservation area in the Dublin City Development Plan. Lands south of the canal are zoned open space (Z9) for the protection, provision and improvement of recreational amenity, open space and green networks. Significant landscape and visual impact associated with construction works on River Road.		

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				<p><b>Road link between Navan Parkway Station and the Road network immediately north of Ashtown Village incorporating a bridge over the railway and canal and a pedestrian cycle bridge over the station in Ashtown.</b> This option would entail re-routing through road traffic away from Ashtown village. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.2m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashton House.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p>	<p><b>Road with cycleway under Railway and Canal West of the Mill and linking to Mill Lane at each end:</b> This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the West and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would rise to an approximate level of 52.5m OD Malin Head over the railway which is at a level of 45.6m. A half through bridge form of construction would be required similar to the adjacent Ratoath Road Bridge.</p> <p>A new mini roundabout is proposed at the junction of Mill Lane and Ashtown Road south of the railway to accommodate traffic interactions.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>This option crosses through the grounds of Ashton House and will require an additional bridge to be constructed over the access road to the house. It is anticipated the proposed roadway would be walled along the extent passing through the estate. The proposal is to tie into the existing roundabout immediately north of Ashtown village. A portion of the boundary wall to Ashton house would need to be demolished to accommodate the link road.</p> <p>This option would require some property acquisition.</p>
<b>Environment</b>	3.1	<b>Noise and Vibration</b>	Estimated number of sensitive properties within 100m of the works. Options closer to more sensitive locations will have an increased risk of generating a noise impact. However, qualitative criteria are also used where necessary to differentiate between the options.	<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>
				Moves traffic to rear of apt block from current road layout. This option will introduce additional noise to the rear apartments while also decreasing road traffic noise levels to the apartments currently facing the front of the apartment block. Construction phase of this option will be less significant than Option 10 due to less excavation required. 168 dwellings within 100m.	Moves traffic to rear of apt block from current road layout. This option will introduce additional noise to the rear apartments while also decreasing road traffic noise levels to the apartments currently facing the front of the apartment block. Construction phase of this option will be more significant due to the excavation required. 206 properties within 100m.
				<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
	3.2	<b>Air Quality and Climate</b>	Estimated number of receptors within 50m reviewed as part of appraisal. Options closer to more sensitive locations will have an increased risk of changes in air quality during construction or operational phases. However, qualitative criteria are also used where necessary to differentiate between the options.	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
				Pedestrian cycle bridge and station reconstruction will have minor impacts during construction for all options. 94 dwellings within 50m of both vehicular route and pedestrian crossing.	Pedestrian cycle bridge and station reconstruction will have minor impacts during construction for all options. Moves traffic to rear of apt block from current road layout. 114 dwellings within 50m where traffic has been moved from front to back.
				The embodied carbon associated with the bridges and retaining walls is more significant for this option than for other options. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	The embodied carbon associated with the bridges and retaining walls is more significant for this option than for other options. Potential for construction phase dust impact is not significant when mitigation measures are put in place.
	3.3	<b>Landscape and Visual (including light)</b>	Key landscape characteristics affected: Impact on landscape character; Impacts on landscape features, protected landscapes. Key visual characteristics affected: Impacts on properties, amenities, protected views, key views.	<b>Significant comparative disadvantage over other options</b>	<b>Significant comparative disadvantage over other options</b>
				The pedestrian cycle bridge is common to all options and overswings the canal in a visually incongruous manner. Pedestrian/cycle bridge will have a significant impact on trees/hedgerows along the royal canal.	The pedestrian cycle bridge is common to all options and overswings the canal in a visually incongruous manner. Pedestrian/cycle bridge will have a significant impact on trees/hedgerows along the royal canal.
				Option will have a very significant impact on boundary trees/woodlands, entrance gates and lodge at Ashton (Ashtown) House, a protected structure (No. 690). Lands of Ashton House and the corridor of the Royal Canal west of Longford Bridge are zoned High Amenity and identified as a Nature Development Area in the Fingal Development Plan.	Option will have a very significant impact on boundary trees/woodlands, entrance gates and lodge at Ashton (Ashtown) House, a protected structure (No. 690). Lands of Ashton House and the corridor of the Royal Canal west of Longford Bridge are zoned High Amenity and identified as a Nature Development Area in the Fingal Development Plan. Moderate impact on setting of Mill buildings on south side of canal and on roadside tree-lined hedgerows leading to railway.

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				<p><b>Roadbridge at Navan Parkway with link to River Road. Selected upgrade works to River Road as far as Ashtown, Pedestrian and cycle overbridge at Ashtown.</b> This option is located approximately 1km to the west of the existing level crossing at Ashdown at the grade separated junction on the Navan Road serving Phoenix Park Railway Station. At this location there is scope to construct a new road link over the canal and railway to link to River Road. This could either descend to tie into River Road or be designed to pass over it to cross the Tolka River and facilitate an onward connection to the Dunsink lands. In the latter case, a short spur would be provided to link to River Road which would need upgrade as far as Ashdown. In both cases this option would involve some vehicular traffic diversion and land acquisition. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides. Short term connection to River road is likely to be in the form of a mini roundabout. River road would require upgrade to Ashdown with a new footpath constructed along the northern boundary of the road and requiring the removal of the associated boundary treatment - walls, trees, brush.</p> <p>The road would be at a similar level as the existing junction Phoenix Park crossing the rail at a level of approximately 55.4m OD Main Head before descending to tie into the level of the River Road at a level of 34.7m. The road on the northern side would be at a gradient of approximately 6% over 300m if permitted to follow a meandering route.</p> <p>It includes the demolition of the existing cable stayed footbridge at the level crossing and the existing station footbridge to provide space for a proposed pedestrian cycle overbridge. The rail level at the crossing is approximately 42.1m OD Main Head, and the canal at 39.3m with the bridge level over the railway at 50.00m. The ramps on either side of the bridge will not exceed 5% gradient. Separate pedestrian stairs could be provided with this option as well to ease pedestrian access and rails for pushing cycle on if required.</p>	<p>Road and cycleway bridge under Railway and Canal West of the Mill and linking to Mill Lane at each end. This option would entail re-routing Ashdown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the west and a 3.65m cycleway to the east. An all-grade turning head and drop-off would be provided to the south of Ashdown Station and a set down area north of the canal.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 36.2m OD Main Head, under the rail which is at a level of 45.6m at the crossing point.</p> <p>It is proposed to construct a pedestrian cycle bridge at the train station. The bridge will cater for disabled and mobility impaired users.</p> <p>The option will provide for a set down, maintenance and emergency vehicle access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p>This option includes the provision of a new pedestrian and cycle overbridge at the location of the train station and local road improvements. The bridge would provide for disabled and mobility impaired users. The arrangement of the bridge would utilize nested ramps parallel to and over the station platforms rising to the east before turning perpendicular to the track to cross the railway. This option requires reconstruction and reconfiguration of the train station under the footprint of the proposed footbridge.</p> <p>The rail level at the crossing is approximately 42.1m to OD Main Head and the canal water level is approximately 39.3m. The walking surface on the proposed bridge over the railway rises to a level of approximately 50.0m. The proposed parapets will be approximately 1.35m high remote from the railway and 1.85m high over and adjacent to the live railway. The ramps on either side of the bridge would not exceed 5% gradient and landings are proposed at 10m centres.</p> <p>Separate pedestrian stairs are proposed to be provided with this option also to provide for direct pedestrian access and rails for pushing bicycles could be installed if required.</p> <p>Constraints on a bridge crossing here include the train station, the Royal Canal, the listed railway structures, and the canal bridge.</p> <p>This option provides for motorised traffic to be diverted along the local road network. Upgrades will be necessary to River Road with the construction of a 2.0m pedestrian way along the southern edge of the road west of Ashdown and localised improvements to the east. Where this is adjacent to Ashdown House it is proposed to run the pedestrian way along the northern boundary of the road due to the protected status of the property. It would be necessary to provide public lighting along the pedestrian way. It is also proposed to carry out small scale improvement works to junctions along Ratoath Road between river road and the Navan Road. These improvements will include the implementation of signal control on the junction of River Road and the Ratoath Road.</p>
3	Environment	3.4	<b>Biodiversity (flora and fauna)</b> Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
		3.5	<b>Cultural, Archaeological and Architectural Heritage</b> Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	Direct impact on former demesne landscape associated with Ashbrook, a protected structure (RPS No. 941). Potential for direct impact on the Royal Canal (RPS No. 944a). Potential to encounter on archaeological deposits that may survive in undeveloped areas.	Indirect impacts on mill and outbuildings (RPS 691). Potential indirect impacts on Longford Bridge (RPS No. 693 FCC, 907 DCC), Royal Canal (RPS No. 944a) and the Royal Canal 10th Lock (RPS No. 944b). Direct impact on demesne of Ashton House (RPS 0690). Potential to encounter archaeological deposits that may survive in undeveloped areas and path of former road way.	Potential for indirect impacts to Longford Bridge (RPS No. 693 FCC, 907 DCC), the Royal Canal (RPS No. 944a). Potential to encounter archaeological deposits that may survive within undeveloped areas.
		3.6	<b>Water Resources</b> Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	Works north of river road are within or immediately adjacent to floodplain of the River Tolka creating potential increase in flood risk to neighbouring lands. Construction works for this option are adjacent to the River Tolka/Royal Canal and has the potential for minor impact on surface water quality during construction of the overbridge. Potential impacts on River Tolka are greater over other options. This option however, removes vehicular traffic borne pollutants by removing traffic at the Royal Canal.  Options 4+4b and 11 have significant comparative disadvantage over other options.	Underpass excavations pose potential risk to groundwater quality and residual flood risk. This option also has some minor potential impacts on surface water from the construction of the pedestrian / cyclist overbridge.  Has some comparative disadvantage over other options.	Works north of river road are within or immediately adjacent to floodplain of the River Tolka creating potential increase in flood risk to neighbouring lands. Construction works for this option are adjacent to the River Tolka/Royal Canal and has the potential for minor impact on surface water quality during construction of the overbridge. Potential impacts on River Tolka are greater over other options. This option however, removes vehicular traffic borne pollutants by removing traffic at the Royal Canal.  Options 4+4b and 11 have significant comparative disadvantage over other options.

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	<b>Parameter</b>	<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 12 (Road OvBridge West from Navan Parkway Stn, PedCycOvBridge at Ashtown Station)</b>	<b>Option 13 (OvrBridge West of Mill, PedOvBridge at Station)</b>
				<p><b>Road link between Navan Parkway Station and the Road network immediately north of Ashtown Village incorporating a bridge over the railway and canal and a pedestrian cycle bridge over the station in Ashtown.</b> This option would entail re-routing through road traffic away from Ashtown village. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.9m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashton House.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p>	<p><b>Road with cycleway under Railway and Canal West of the Mill and linking to Mill Lane at each end:</b> This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the West and a 3.05m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would rise to an approximate level of 52.5m OD Main Head over the railway which is at a level of 45.6m. A half through bridge form of construction would be required similar to the adjacent Ratoath Road Bridge.</p> <p>A new mini roundabout is proposed at the junction of Mill Lane and Ashtown Road south of the railway to accommodate traffic interactions.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>This option crosses through the grounds of Ashton House and will require an additional bridge to be constructed over the access road to the house. It is anticipated the proposed roadway would be walled along the extent passing through the estate. The proposal is to tie into the existing roundabout immediately north of Ashtown village. A portion of the boundary wall to Ashton house would need to be demolished to accommodate the link road.</p> <p>This option would require some property acquisition.</p>
3	Environment	3.4	<b>Biodiversity (flora and fauna)</b> Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	<p><b>Some comparative advantage over other options</b></p> <p>This option is hydrologically connected to European Sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to these sites or any other European Site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. During construction of the pedestrian/cycle overbridge, water quality in the canal could be impacted during the dewatering required for the realignment of the canal in addition to the demolition of the existing bridge. Works within the canal could impact fish and native white-clawed crayfish which will have to be taken from the water in advance of the works. Demolition works could also disturb and displace fauna. Badger and their sets could be disturbed during construction leading to sett abandonment. Demolition of Old Mill Lane buildings may impact bats but further studies would be required to determine potential impacts on bats. Loss of woodland, scrub and grassland habitat is anticipated.</p>	<p><b>Some comparative advantage over other options</b></p> <p>This option is hydrologically connected to European Sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to this or any other European site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. During construction of the pedestrian/cycle overbridge, water quality in the canal could be impacted during the dewatering required for the realignment of the canal in addition to the demolition of the existing bridge. Works within the canal could impact fish and native white-clawed crayfish which will have to be taken from the water in advance of the works. Demolition works could also disturb and displace fauna. Demolition of Old Mill Lane buildings may impact bats but further studies would be required to determine potential impacts on bats. Loss of woodland and grassland habitat is anticipated.</p>
		3.5	<b>Cultural, Archaeological and Architectural Heritage</b> Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	<p><b>Significant comparative disadvantage over other options</b></p> <p>Direct impacts on entrance and demesne associated with Ashton House and indirect impact on setting of Ashton House (RPS No. 0690). Indirect impacts on mill and outbuildings (RPS No. 691) and Pelletstown House (structure of architectural merit). Potential indirect impacts on Royal Canal (RPS No. 944a) and the Royal Canal 10th Lock (RPS No. 944b). Potential to encounter archaeological deposits that may survive in undeveloped areas and path of former road way.</p>	<p><b>Significant comparative disadvantage over other options</b></p> <p>Direct impacts on entrance and demesne associated with Ashton House (RPS 0690). Indirect impacts on mill and outbuildings (RPS 691) and Pelletstown House (structure of architectural merit). Potential indirect impacts on Royal Canal (RPS No. 944a) and the Royal Canal 10th Lock (RPS No. 944b). Potential to encounter archaeological deposits that may survive in undeveloped areas and path of former road way.</p>
		3.6	<b>Water Resources</b> Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	<p><b>Significant comparative advantage over other options</b></p> <p>This option has the potential to impact on water quality of the Royal Canal during the construction phase of the road and the pedestrian / cyclist overbridge. Has some comparative advantage over other options.</p>	<p><b>Significant comparative advantage over other options</b></p> <p>This option has the potential to impact on water quality of the Royal Canal during the construction phase of the road and the pedestrian / cyclist overbridge. Has some comparative advantage over other options.</p>



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<b>Parameter</b>	<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 4 &amp; 4b (Road bridge West + PedCycOvBridge)</b>	<b>Option 10 (UnBridge West of Mill, PedOvBridge at Station)</b>	<b>Option 11 (Improvements on Local Road Network, PedOvBridge at Station)</b>	
			<p><b>Roadbridge at Navan Parkway with link to River Road, Selected upgrade works to River Road as far as Ashtown, Pedestrian and cycle overbridge at Ashtown.</b> This option is located approximately 1km to the west of the existing level crossing at Ashtown at the grade separated junction on the Navan Road serving Phoenix Park Railway Station. At this location there is scope to construct a new road link over the canal and railway to link to River Road. This could either descend to tie into River Road or be designed to pass over it to cross the Tolka River and facilitate an onward connection to the Dunsink lands. In the latter case, a short spur would be provided to link to River Road which would need upgrade as far as Ashtown. In both cases this option would involve some vehicular traffic diversion and land acquisition. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides. Short term connection to River road is likely to be in the form of a mini roundabout. River road would require upgrade to Ashtown with a new footpath constructed along the northern boundary of the road and requiring the removal of the associated boundary treatment - walls, trees, brush.</p> <p>The road would be at a similar level as the existing junction Phoenix Park crossing the rail at a level of approximately 55.4m OD Malin Head before descending to tie into the level of the River Road at a level of 54.7m. The road on the northern side would be at a gradient of approximately 6% over 300m if permitted to follow a meandering route.</p> <p>It includes the demolition of the existing cable stayed footbridge at the level crossing and the existing station footbridge to provide space for a proposed pedestrian cycle overbridge. The rail level at the crossing is approximately 42.1m OD Malin Head, and the canal at 39.3m with the bridge level over the railway at 50.00m. The ramps on either side of the bridge will not exceed 5% gradient. Separate pedestrian stairs could be provided with this option as well as ease pedestrian access and rails for pushing cycle on if required.</p>	<p>Road and cycleway bridge under Railway and Canal West of the Mill and linking to Mill Lane at each end. This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the west and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 36.2m OD Malin Head, under the rail which is at a level of 45.6m at the crossing point.</p> <p>It is proposed to construct a pedestrian cycle bridge at the train station. The bridge will cater for disabled and mobility impaired users.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p>This option includes the provision of a <b>new pedestrian and cycle overbridge at the location of the train station and local road improvements.</b> The bridge would provide for disabled and mobility impaired users. The arrangement of the bridge would utilise raised ramps parallel to and over the station platforms rising to the east before turning perpendicular to the track to cross the railway. This option requires reconstruction and reconfiguration of the train station under the footprint of the proposed footbridge.</p> <p>The rail level at the crossing is approximately 42.1m to OD Malin Head and the canal water level is approximately 39.3m. The walking surface on the proposed bridge over the railway rises to a level of approximately 50.0m. The proposed parapets will be approximately 1.35m high remote from the railway and 1.85m high over and adjacent to the live railway. The ramps on either side of the bridge would not exceed 5% gradient and landings are proposed at 10m centres.</p> <p>Separate pedestrian stairs are proposed to be provided with this option also to provide for direct pedestrian access and rails for pushing bicycles could be installed if required. Constraints on a bridge crossing here include the train station, the Royal Canal, the listed railway structures, and the canal bridge.</p> <p>This option provides for motorised traffic to be diverted along the local road network. Upgrades will be necessary to River Road with the construction of a 2.0m pedestrian way along the southern edge of the road west of Ashtown and localised improvements to the east. Where this is adjacent to Ashon House it is proposed to run the pedestrian way along the northern boundary of the road due to the protected status of the property. It would be necessary to provide public lighting along the pedestrian way. It is also proposed to carry out small scale improvement works to junctions along Ratoath Road between river road and the Navan Road. These improvements will include the implementation of signal control on the junction of River Road and the Ratoath Road.</p>	
<b>Environment</b>	3.7	<b>Agriculture and Non-Agricultural</b>	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	Some comparative disadvantage over other options  The agricultural impact will have a slight impact on Ashtown Stables. The non-agricultural impact will have a significant impact on one residential property. The remaining residential and commercial property impacts will be slight. The removal of vehicular access over the railway at Ashtown will have a slight to moderate indirect impact on businesses on either side of the railway.	Significant comparative disadvantage over other options  The agricultural impact will have a slight impact on Ashtown Stables. The non-agricultural impact will include a profound impact on one commercial (Burke Bros Ltd) property and significant impacts on one commercial property (Gowans) and development property. The remaining residential, commercial and amenity property impacts will be slight.	Significant comparative advantage over other options  The agricultural and non-agricultural property impacts will have slight property impacts associated with upgrade of local road network including River road from Dunsink Lane to Ratoath Road.  The removal of vehicular access over the railway at Ashtown will have a slight to moderate indirect impact on businesses on either side of the railway.
	3.8	<b>Geology and Soils (including Waste)</b>	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. Soil or topsoil resources to be developed/removed. Existing information relating to potential to encounter contaminated land. High-level assessment based on the likely structures/ works required and the potential for ground contamination due to historic landfills, pits and quarries.	Some comparative disadvantage over other options  Overbridge alignment causes fill import requirements (Minor negative). Comparatively higher amount of open grassed gardens to be stripped of topsoil however sideslopes could be resoled. Option 4b limited to existing footprint (minimal impact) however difficulties in interaction with existing platform structures. Survey / investigation required to manage geotechnical risks.	Some comparative disadvantage over other options  Underbridge option means that some materials may arise, which could possibly be suitable for reuse elsewhere on the project (Minor positive). Some made ground on-site (requires walkover survey / investigation) however this is where ground has already been sealed over so loss of topsoil is comparatively lower. Associated impact of interfering with the canal and existing railway, which may require specific materials be imported. Involves other geotechnical risks to design and construction which would require further studies and design information. Minor impact for pedestrian overbridge as this has difficulties in interaction with existing platform structures. Survey / investigation required to manage geotechnical risks.	Some comparative advantage over other options  Road network improvements on-line mainly within existing footprint with minimal/low fill import requirements (minimal impact). This avoids stripping topsoil in the majority and would provide more effective use of materials to maintain and improve existing road corridors rather than requiring bulk earthworks haulage (comparative advantage over other options). Minor impact for pedestrian overbridge as this has difficulties in interaction with existing platform structures. Survey / investigation required to manage geotechnical risks.
	3.9	<b>Radiation and Stray Current</b>	Overall likely impact on existing sources of electromagnetic radiation.	Comparable to other options  It is assumed that the routing of the cabling, the location of existing substations, hubs etc. along the line will be changed or impacted by the selection of any of the options over the entire project. All Do-Something options are comparable from an EMI perspective at this stage in the assessment.	Comparable to other options  It is assumed that the routing of the cabling, the location of existing substations, hubs etc. along the line will be changed or impacted by the selection of any of the options over the entire project. All Do-Something options are comparable from an EMI perspective at this stage in the assessment.	Comparable to other options  It is assumed that the routing of the cabling, the location of existing substations, hubs etc. along the line will be changed or impacted by the selection of any of the options over the entire project. All Do-Something options are comparable from an EMI perspective at this stage in the assessment.

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Parameter	Criteria	Sub-Criteria (Quantitative/Qualitative)	Option 12 (Road OvBridge West from Navan Parkway Stn, PedCycOvBridge at Ashtown Station)	Option 13 (OvrBridge West of Mill, PedOvBridge at Station)	
			<p><b>Road link between Navan Parkway Station and the Road network immediately north of Ashtown Village incorporating a bridge over the railway and canal and a pedestrian cycle bridge over the station in Ashtown.</b> This option would entail re-routing through road traffic away from Ashtown village. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.9m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashton House.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p>	<p><b>Road with cycleway under Railway and Canal West of the Mill and linking to Mill Lane at each end:</b> This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the West and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would rise to an approximate level of 52.5m OD Malin Head over the railway which is at a level of 45.6m. A half through bridge form of construction would be required similar to the adjacent Ratoath Road Bridge.</p> <p>A new mini roundabout is proposed at the junction of Mill Lane and Ashtown Road south of the railway to accommodate traffic interactions.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>This option crosses through the grounds of Ashton House and will require an additional bridge to be constructed over the access road to the house. It is anticipated the proposed roadway would be walled along the extent passing through the estate. The proposal is to tie into the existing roundabout immediately north of Ashtown village. A portion of the boundary wall to Ashton house would need to be demolished to accommodate the link road.</p> <p>This option would require some property acquisition.</p>	
Environment	3.7	Agriculture and Non-Agricultural	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	<p><b>Some comparative advantage over other options</b></p> <p>The non-agricultural impact will have a moderate impact on Ashtown House lands and one development property. The indirect impacts on amenity property will be slight.</p> <p>The removal of vehicular access over the railway at Ashtown will have a slight to moderate indirect impact on businesses on either side of the railway.</p>	<p><b>Significant comparative disadvantage over other options</b></p> <p>The agricultural impact will have a slight impact on Ashtown Stables. The non-agricultural impact will include a profound impact on one commercial (Burke Bros Ltd.) property and significant impacts on one commercial property (Gowans) and one development property. It will also include a moderate impact on Ashtown House lands. The remaining residential, commercial and amenity property impacts will be slight.</p>
	3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. Soil or topsoil resources to be developed/removed. Existing information relating to potential to encounter contaminated land. High-level assessment based on the likely structures/ works required and the potential for ground contamination due to historic landfills, pits and quarries.	<p><b>Some comparative disadvantage over other options</b></p> <p>Road overbridge alignment has fill import requirements (minor negative impact). Comparatively higher amount of open grassed lands to be stripped of topsoil however some slopes could be recycled. Some made ground present on-site (requires investigation). Minimal impact for pedestrian/station overbridge but this has difficulties in interaction with existing platform structures. Survey / investigation required to manage geotechnical risks.</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>Road overbridge alignment has fill import requirements (minor negative impact). Some made ground on-site to south side (requires walkover survey / investigation) however this is partly where ground has already been sealed over so loss of topsoil is lower. Area comparatively increased on the north side leading to loss of topsoil. Minimal impact for pedestrian/station overbridge but this has difficulties in interaction with existing platform structures. Survey / investigation required to manage geotechnical risks.</p>
	3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	<p><b>Comparable to other options</b></p> <p>It is assumed that the routing of the cabling, the location of existing substations, hubs etc. along the line will be changed or impacted by the selection of any of the options over the entire project. All Do-Something options are comparable from an EMI perspective at this stage in the assessment.</p>	<p><b>Comparable to other options</b></p> <p>It is assumed that the routing of the cabling, the location of existing substations, hubs etc. along the line will be changed or impacted by the selection of any of the options over the entire project. All Do-Something options are comparable from an EMI perspective at this stage in the assessment.</p>

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				<b>Ashtown Level Crossing Assessment</b>				
	<b>Parameter</b>	<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 4 &amp; 4b (Road bridge West + PedCycOvBridge)</b>	<b>Option 10 (UnBridge West of Mill, PedOvBridge at Station)</b>	<b>Option 11 (Improvements on Local Road Network, PedOvBridge at Station)</b>		
				<p><b>Roadbridge at Navan Parkway with link to River Road, Selected upgrade works to River Road as far as Ashtown, Pedestrian and cycle overbridge at Ashtown.</b> This option is located approximately 1km to the west of the existing level crossing at Ashtown at the grade separated junction on the Navan Road serving Phoenix Park Railway Station. At this location there is scope to construct a new road link over the canal and railway to link to River Road. This could either descend to tie into River Road or be designed to pass over it to cross the Tolka River and facilitate an onward connection to the Dunsink lands. In the latter case, a short spur would be provided to link to River Road which would need upgrade as far as Ashtown. In both cases this option would involve some vehicular traffic diversion and land acquisition. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides. Short term connection to River road is likely to be in the form of a mini roundabout. River road would require upgrade to Ashtown with a new footpath constructed along the northern boundary of the road and requiring the removal of the associated boundary treatment - walls, trees, brush.</p> <p>The road would be at a similar level as the existing junction Phoenix Park crossing the rail at a level of approximately 55.4m OD Malin Head before descending to tie into the level of the River Road at a level of 34.7m. The road on the northern side would be at a gradient of approximately 6% over 300m if permitted to follow a meandering route.</p> <p>It includes the demolition of the existing cable stayed footbridge at the level crossing and the existing station footbridge to provide space for a proposed pedestrian cycle overbridge. The rail level at the crossing is approximately 42.1m OD Malin Head, and the canal at 39.3m with the bridge level over the railway at 50.0m. The ramps on either side of the bridge will not exceed 5% gradient. Separate pedestrian stairs could be provided with this option as well to ease pedestrian access and rails for pushing cycle on if required.</p>	<p>Road and cycleway bridge under Railway and Canal West of the Mill and linking to Mill Lane at each end. This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the west and a 3.65m cycleway to the east. An air-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 36.2m OD Malin Head, under the rail which is at a level of 45.6m at the crossing point.</p> <p>It is proposed to construct a pedestrian cycle bridge at the train station. The bridge will cater for disabled and mobility impaired users.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p>This option includes the provision of a <b>new pedestrian and cycle overbridge at the location of the train station and local road improvements.</b> The bridge would provide for disabled and mobility impaired users. The arrangement of the bridge would utilise nested ramps parallel to and over the station platforms rising to the east before turning perpendicular to the track to cross the railway. This option requires reconstruction and reconfiguration of the train station under the footprint of the proposed footbridge.</p> <p>The rail level at the crossing is approximately 42.1m to OD Malin Head and the canal water level is approximately 39.3m. The walking surface on the proposed bridge over the railway rises to a level of approximately 50.0m. The proposed parapets will be approximately 1.35m high remote from the railway and 1.85m high over and adjacent to the live railway. The ramps on either side of the bridge would not exceed 5% gradient and landings are proposed at 10m centres.</p> <p>Separate pedestrian stairs are proposed to be provided with this option also to provide for direct pedestrian access and rails for pushing bicycles could be installed if required.</p> <p>Constraints on a bridge crossing here include the train station, the Royal Canal, the listed railway structures, and the canal bridge.</p> <p>This option provides for motorised traffic to be diverted along the local road network. Upgrades will be necessary to River Road with the construction of a 2.0m pedestrian way along the southern edge of the road west of Ashtown and localised improvements to the east. Where this is adjacent to Ashion House it is proposed to run the pedestrian way along the northern boundary of the road due to the protected status of the property. It would be necessary to provide public lighting along the pedestrian way. It is also proposed to carry out small scale improvement works to junctions along Ratoath Road between river road and the Navan Road. These improvements will include the implementation of signal control on the junction of River Road and the Ratoath Road.</p>		
4	Accessibility & Social inclusion	4.1	Impact on Vulnerable Groups	Impacts on low income groups, non-car owners, mobility impaired, visually impaired and people with a disability.	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	
					Facilities for non-motorised vulnerable road users are provided for all options at the train station. All options are equivalent in this regard.	Facilities for non-motorised vulnerable road users are provided for all options at the train station. All options are equivalent in this regard.	Facilities for non-motorised vulnerable road users are provided for all options at the train station. All options are equivalent in this regard.	
					Road traffic diverted distance route is 2.5km (1.4 x diversion route) steep gradients on north side of option will be a disadvantage to vulnerable road users.	Road traffic diverted distance route is 572m (1.1x diversion route).	Road traffic diverted distance route is 4.7km (10 x diversion route).	
		4.2	Stations Accessibility	Quantification of increased service levels to the vulnerable groups.	Comparable to other options	Comparable to other options	Comparable to other options	
					Station Accessibility is addressed for all level crossing options in proximity to a station	Station Accessibility is addressed for all level crossing options in proximity to a station	Station Accessibility is addressed for all level crossing options in proximity to a station	
This option does not significantly affect access to the station	This option does not significantly affect access to the station				This option does not significantly affect access to the station			
4.3	Social Inclusion	Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options			
			Diverted distance route 798m (1.6x diversion route) but existing vehicular route severed.	This option does not cause community severance.	Diverted distance for vehicular traffic 4.3km (10 x diversion route), proposed pedestrian / cycle bridge maintains local non-vehicular access.			
			Community facilities affected by reduced access include Shopping facilities, Giraffe Childcare, Pallestown Educate Together National School - North of the railway and Halfway House, Ashtown Post Office St Dominics College, Meaghers Pharmacy, Ashtown Stables, Daughters of Charity - south of the railway.	This option does not curtail access to community amenities	Community facilities affected by reduced access include Shopping facilities, Giraffe Childcare, Pallestown Educate Together National School - North of the railway and Halfway House, Ashtown Post Office St Dominics College, Meaghers Pharmacy, Ashtown Stables, Daughters of Charity - south of the railway.			

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					<b>Ashtown Level Crossing Assessment</b>	
	<b>Parameter</b>		<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 12 (Road OvBridge West from Navan Parkway Stn, PedCycOvBridge at Ashtown Station)</b>	<b>Option 13 (OvrBridge West of Mill, PedOvBridge at Station)</b>
					<p><b>Road link between Navan Parkway Station and the Road network immediately north of Ashtown Village incorporating a bridge over the railway and canal and a pedestrian cycle bridge over the station in Ashtown.</b> This option would entail re-routing through road traffic away from Ashtown village. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.9m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashton House.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p>	<p><b>Road with cycleway under Railway and Canal West of the Mill and linking to Mill Lane at each end:</b> This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the West and a 3.05m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would rise to an approximate level of 52.5m OD Main Head over the railway which is at a level of 45.6m. A half through bridge form of construction would be required similar to the adjacent Ratcath Road Bridge.</p> <p>A new mini roundabout is proposed at the junction of Mill Lane and Ashtown Road south of the railway to accommodate traffic interactions.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>This option crosses through the grounds of Ashton House and will require an additional bridge to be constructed over the access road to the house. It is anticipated the proposed roadway would be walled along the extent passing through the estate. The proposal is to tie into the existing roundabout immediately north of Ashtown village. A portion of the boundary wall to Ashton house would need to be demolished to accommodate the link road.</p> <p>This option would require some property acquisition.</p>
					<p><b>Some comparative disadvantage over other options</b></p>	<p><b>Some comparative advantage over other options</b></p>
		4.1	<b>Impact on Vulnerable Groups</b>	Impacts on low income groups, non-car owners, mobility impaired, visually impaired and people with a disability.	<p>Facilities for non-motorised vulnerable road users are provided for all options at the train station. All options are equivalent in this regard.</p> <p>Road traffic diverted distance route is 2.5km (1.4 x diversion route) steep gradients on north side of option will be a disadvantage to vulnerable road users.</p> <p>The stables represent a significant amenity for vulnerable persons. This option is likely to result in some impact on the stables during construction.</p>	<p>Facilities for non-motorised vulnerable road users are provided for all options at the train station. All options are equivalent in this regard.</p> <p>Road traffic diverted distance route is 572m (1.1x diversion route).</p> <p>The stables represent a significant amenity for vulnerable persons. This option is likely to result in a small degree of impact on the stables during construction.</p>
		4.2	<b>Stations Accessibility</b>	Quantification of increased service levels to the vulnerable groups.	<p><b>Comparable to other options</b></p>	<p><b>Comparable to other options</b></p>
		4.3	<b>Social Inclusion</b>	Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	<p>Diverted distance route 798m (1.6x diversion route) but existing vehicular route severed.</p> <p>Community facilities affected by reduced access include Shopping facilities, Giraffe Childcare, Pelletstown Educate Together National School - North of the railway and Halfway House, Ashtown Post Office St Dominics College, Meaghers Pharmacy, Ashtown Stables, Daughters of Charity - south of the railway.</p>	<p>This option does not cause community severance.</p> <p>This option does not curtail access to community amenities</p> <p>Diverted distance route is 572m (1.1x diversion route).</p> <p>This option impacts the southern extremity of Ashtown Stables</p>
4	<b>Accessibility &amp; Social inclusion</b>					

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	<b>Parameter</b>	<b>Criteria</b>	<b>Sub-Criteria (Quantitative/ Qualitative)</b>	<b>Option 4 &amp; 4b (Road bridge West + PedCycOvBridge)</b>	<b>Option 10 (UnBridge West of Mill, PedOvBridge at Station)</b>	<b>Option 11 (Improvements on Local Road Network, PedOvBridge at Station)</b>	
				<p><b>Roadbridge at Navan Parkway with link to River Road. Selected upgrade works to River Road as far as Ashtown, Pedestrian and cycle overbridge at Ashtown.</b> This option is located approximately 1km to the west of the existing level crossing at Ashtown at the grade separated junction on the Navan Road serving Phoenix Park Railway Station. At this location there is scope to construct a new road link over the canal and railway to link to River Road. This could either descend to tie into River Road or be designed to pass over it to cross the Tolka River and facilitate an onward connection to the Dunsink lands. In the latter case, a short spur would be provided to link to River Road which would need upgrade as far as Ashtown. In both cases this option would involve some vehicular traffic diversion and land acquisition. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides. Short term connection to River road is likely to be in the form of a mini roundabout. River road would require upgrade to Ashtown with a new footpath constructed along the northern boundary of the road and requiring the removal of the associated boundary treatment - walls, trees, brush.</p> <p>The road would be at a similar level as the existing junction Phoenix Park crossing the rail at a level of approximately 55.4m OD Malin Head before descending to tie into the level of the River Road at a level of 34.7m. The road on the northern side would be at a gradient of approximately 6% over 300m if permitted to follow a meandering route.</p> <p>It includes the demolition of the existing cable stayed footbridge at the level crossing and the existing station footbridge to provide space for a proposed pedestrian cycle overbridge. The rail level at the crossing is approximately 42.1m OD Malin Head, and the canal at 39.3m with the bridge level over the railway at 50.00m. The ramps on either side of the bridge will not exceed 5% gradient. Separate pedestrian stairs could be provided with this option as well to ease pedestrian access and rails for pushing cycle on if required.</p>	<p>Road and cycleway bridge under Railway and Canal West of the Mill and linking to Mill Lane at each end. This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the west and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 36.2m OD Malin Head, under the rail which is at a level of 45.6m at the crossing point.</p> <p>It is proposed to construct a pedestrian cycle bridge at the train station. The bridge will cater for disabled and mobility impaired users.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p>This option includes the provision of a <b>new pedestrian and cycle overbridge at the location of the train station and local road improvements.</b> The bridge would provide for disabled and mobility impaired users. The arrangement of the bridge would utilise nested ramps parallel to and over the station platforms rising to the east before turning perpendicular to the track to cross the railway. This option requires reconstruction and reconfiguration of the train station under the footprint of the proposed footbridge.</p> <p>The rail level at the crossing is approximately 42.1m to OD Malin Head and the canal water level is approximately 39.3m. The walking surface on the proposed bridge over the railway rises to a level of approximately 50.0m. The proposed parapets will be approximately 1.35m high remote from the railway and 1.85m high over and adjacent to the live railway. The ramps on either side of the bridge would not exceed 5% gradient and landings are proposed at 10m centres.</p> <p>Separate pedestrian stairs are proposed to be provided with this option also to provide for direct pedestrian access and rails for pushing bicycles could be installed if required.</p> <p>Constraints on a bridge crossing here include the train station, the Royal Canal, the listed railway structures, and the canal bridge.</p> <p>This option provides for motorised traffic to be diverted along the local road network. Upgrades will be necessary to River Road with the construction of a 2.0m pedestrian way along the southern edge of the road west of Ashtown and localised improvements to the east. Where this is adjacent to Ashon House it is proposed to run the pedestrian way along the northern boundary of the road due to the protected status of the property. It would be necessary to provide public lighting along the pedestrian way. It is also proposed to carry out small scale improvement works to junctions along Ratoath Road between river road and the Navan Road. These improvements will include the implementation of signal control on the junction of River Road and the Ratoath Road.</p>	
5	Safety	5.1	Rail Safety	Safety for Rail users – removal of Level crossings is considered a significant safety enhancement	Comparable to other options	Comparable to other options	Comparable to other options
				Option removes the rail - road interface	Option removes the rail - road interface	Option removes the rail - road interface	
				Comparable to other options	Comparable to other options	Comparable to other options	
		5.2	Vehicular Traffic Safety	Quality of Access for these road users, lengths of diversions, removal of interface with rail and other modes of transport	Comparable to other options	Comparable to other options	Comparable to other options
				This option closes the level crossing - removes a significant hazard to drivers; Road traffic diverted distance route is 2.5km (1.4 x diversion route)	This option closes the level crossing - removes a significant hazard to drivers; Road traffic diverted distance route is 0.6km (1.1 x diversion route)	This option closes the level crossing - removes a significant hazard to drivers; This option will result in traffic diversions of up to 4.7km and some increased congestion on the local road network.	
				Comparable to other options	Comparable to other options	Comparable to other options	
		5.3	Pedestrian, Cyclist and Vulnerable Road user Safety	Quality of Access for these road users. removal of interfaces	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
				Diverted road distance route is 1.5km (3 x diversion route). With the incorporation of a pedestrian / cycle bridge in this option, any impact on pedestrians, cyclists and vulnerable road users is significantly reduced. Detour -400m. In addition to providing a pedestrian / cycle route at the station this option provided additional north south access for pedestrians and cyclists along the proposed roadway.	Diverted road distance route is 572m (1.1x diversion route). With the incorporation of a pedestrian / cycle bridge in this option, any impact on pedestrians, cyclists and vulnerable road users is significantly reduced. Detour -400m. In addition to providing a pedestrian / cycle route at the station this option provided additional north south access for pedestrians and cyclists along the proposed roadway.	This option removes the level crossing. It replaces pedestrian and cycle access with a pedestrian cycle bridge. Other vulnerable road users are diverted onto the existing road network. Diverted road users will be required to negotiate up to 6No additional junctions including traffic light junctions and roundabouts, typically turning left travelling southbound, right if travelling northbound. This options does not provide for segregation on the diversion routes for vulnerable road users.	
				Comparable to other options	Comparable to other options	Comparable to other options	

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	<b>Parameter</b>		<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 12 (Road OvBridge West from Navan Parkway Stn, PedCycOvBridge at Ashtown Station)</b>	<b>Option 13 (OvrBridge West of Mill, PedOvBridge at Station)</b>
					<p><b>Road link between Navan Parkway Station and the Road network immediately north of Ashtown Village incorporating a bridge over the railway and canal and a pedestrian cycle bridge over the station in Ashtown.</b> This option would entail re-routing through road traffic away from Ashtown village. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.9m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashton House.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p>	<p><b>Road with cycleway under Railway and Canal West of the Mill and linking to Mill Lane at each end:</b> This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the West and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would rise to an approximate level of 52.5m OD Malin Head over the railway which is at a level of 45.6m. A half through bridge form of construction would be required similar to the adjacent Ratoath Road Bridge.</p> <p>A new mini roundabout is proposed at the junction of Mill Lane and Ashtown Road south of the railway to accommodate traffic interactions.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>This option crosses through the grounds of Ashton House and will require an additional bridge to be constructed over the access road to the house. It is anticipated the proposed roadway would be walled along the extent passing through the estate. The proposal is to tie into the existing roundabout immediately north of Ashtown village. A portion of the boundary wall to Ashton house would need to be demolished to accommodate the link road.</p> <p>This option would require some property acquisition.</p>
5	Safety	5.1	Rail Safety	Safety for Rail users – removal of Level crossings is considered a significant safety enhancement	- <b>Comparable to other options</b>  Option removes the rail - road interface	- <b>Comparable to other options</b>  Option removes the rail - road interface
		5.2	Vehicular Traffic Safety	Quality of Access for these road users, lengths of diversions, removal of interface with rail and other modes of transport	- <b>Comparable to other options</b>  This option closes the level crossing - removes a significant hazard to drivers; Road traffic diverted distance route is 2.5km (1.4 x diversion route)	- <b>Comparable to other options</b>  This option closes the level crossing - removes a significant hazard to drivers; Road traffic diverted distance route is 0.6km (1.1 x diversion route)
		5.3	Pedestrian, Cyclist and Vulnerable Road user Safety	Quality of Access for these road users, removal of interfaces	- <b>Some comparative advantage over other options</b>  Diverted road distance route is 2.5km (3x diversion route) steep gradients on north side of option will be a disadvantage to vulnerable road users.  With the incorporation of a pedestrian / cycle bridge in this option, any impact on pedestrians, cyclists and vulnerable road users is significantly reduced. Detour –400m.  In addition to providing a pedestrian / cycle route at the station this option provided additional north south access for pedestrians and cyclists along the proposed roadway.	- <b>Some comparative advantage over other options</b>  Diverted road distance route is 572m (1.1x diversion route).  With the incorporation of a pedestrian / cycle bridge in this option, any impact on pedestrians, cyclists and vulnerable road users is significantly reduced. Detour –400m.  In addition to providing a pedestrian / cycle route at the station this option provided additional north south access for pedestrians and cyclists along the proposed roadway.

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	Parameter	Criteria	Sub-Criteria (Quantitative/Qualitative)	Option 4 & 4b (Road bridge West + PedCycOvBridge)	Option 10 (UnBridge West of Mill, PedOvBridge at Station)	Option 11 (Improvements on Local Road Network, PedOvBridge at Station)
				<p><b>Roadbridge at Navan Parkway with link to River Road, Selected upgrade works to River Road as far as Ashtown, Pedestrian and cycle overbridge at Ashtown.</b> This option is located approximately 1 km to the west of the existing level crossing at Ashtown at the grade separated junction on the Navan Road serving Phoenix Park Railway Station. At this location there is scope to construct a new road link over the canal and railway to link to River Road. This could either descend to tie into River Road or be designed to pass over it to cross the Tolka River and facilitate an onward connection to the Dunsink lands. In the latter case, a short spur would be provided to link to River Road which would need upgrade as far as Ashtown. In both cases this option would involve some vehicular traffic diversion and land acquisition. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides. Short term connection to River road is likely to be in the form of a mini roundabout. River road would require upgrade to Ashtown with a new footpath constructed along the northern boundary of the road and requiring the removal of the associated boundary treatment - walls, trees, brush.</p> <p>The road would be at a similar level as the existing junction Phoenix Park crossing the rail at a level of approximately 55.4m OD Malin Head before descending to tie into the level of the River Road at a level of 34.7m. The road on the northern side would be at a gradient of approximately 6% over 300m if permitted to follow a meandering route.</p> <p>It includes the demolition of the existing cable stayed footbridge at the level crossing and the existing station footbridge to provide space for a proposed pedestrian cycle overbridge. The rail level at the crossing is approximately 42.1m OD Malin Head, and the canal at 39.3m with the bridge level over the railway at 50.00m. The ramps on either side of the bridge will not exceed 5% gradient. Separate pedestrian stairs could be provided with this option as well to ease pedestrian access and rails for pushing cycle on if required.</p>	<p>Road and cycleway bridge under Railway and Canal West of the Mill and linking to Mill Lane at each end. This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the west and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 36.2m OD Malin Head, under the rail which is at a level of 45.6m at the crossing point.</p> <p>It is proposed to construct a pedestrian cycle bridge at the train station. The bridge will cater for disabled and mobility impaired users.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p>This option includes the provision of a new pedestrian and cycle overbridge at the location of the train station and local road improvements. The bridge would provide for disabled and mobility impaired users. The arrangement of the bridge would utilise nested ramps parallel to and over the station platforms rising to the east before turning perpendicular to the track to cross the railway. This option requires reconstruction and reconfiguration of the train station under the footprint of the proposed footbridge.</p> <p>The rail level at the crossing is approximately 42.1m to OD Malin Head and the canal water level is approximately 39.3m. The walking surface on the proposed bridge over the railway rises to a level of approximately 50.0m. The proposed parapets will be approximately 1.35m high remote from the railway and 1.85m high over and adjacent to the live railway. The ramps on either side of the bridge would not exceed 5% gradient and landings are proposed at 10m centres.</p> <p>Separate pedestrian stairs are proposed to be provided with this option also to provide for direct pedestrian access and rails for pushing bicycles could be installed if required. Constraints on a bridge crossing here include the train station, the Royal Canal, the listed railway structures, and the canal bridge.</p> <p>This option provides for motorised traffic to be diverted along the local road network. Upgrades will be necessary to River Road with the construction of a 2.0m pedestrian way along the southern edge of the road west of Ashtown and localised improvements to the east. Where this is adjacent to Ashton House it is proposed to run the pedestrian way along the northern boundary of the road due to the protected status of the property. It would be necessary to provide public lighting along the pedestrian way. It is also proposed to carry out small scale improvement works to junctions along Ratoath Road between river road and the Navan Road. These improvements will include the implementation of signal control on the junction of River Road and the Ratoath Road.</p>
6	Physical Activity	6.1	Connectivity to adjoining cycling facilities	<p>- Comparable to other options</p> <p>This option supports good linkage between existing and proposed cycle facilities</p> <p>The quality of access to the train station for pedestrians and cyclists is good in respect of this option.</p>	<p>- Comparable to other options</p> <p>This option supports good linkage between existing and proposed cycle facilities</p> <p>The quality of access to the train station for pedestrians and cyclists is good in respect of this option.</p>	<p>- Comparable to other options</p> <p>This option supports good linkage between existing and proposed cycle facilities</p> <p>The quality of access to the train station for pedestrians and cyclists is good in respect of this option.</p>
		6.2	Permeability and local access opportunity	<p>- Comparable to other options</p> <p>Journey Time and lengths of diversions for active modes and numbers affected. Analysis of the connectivity between level crossing and green areas/key attractions related to active mode</p> <p>Cross Railway journey = nil as the proposed option is along the plan alignment of the existing Ashtown Road.</p> <p>Diversion for cyclists when level crossing closed 0.3km</p> <p>The principal high amenity greenspace in the vicinity of the existing train station is the Royal canal. This access is maintained by the proposed bridge scheme.</p>	<p>- Comparable to other options</p> <p>Cross Railway journey = nil as the proposed option is along the plan alignment of the existing Ashtown Road.</p> <p>Diversion for cyclists when level crossing closed 0.3km</p> <p>The principal high amenity greenspace in the vicinity of the existing train station is the Royal canal. This access is maintained by the proposed bridge scheme.</p>	<p>- Comparable to other options</p> <p>Cross Railway journey = nil as the proposed option is along the plan alignment of the existing Ashtown Road.</p> <p>Diversion for cyclists when level crossing closed is 0.3km.</p> <p>The principal high amenity greenspace in the vicinity of the existing train station is the Royal canal. This access is maintained by the proposed bridge scheme.</p>
			Criteria	Option 4 & 4b (Road bridge West + PedCycOvBridge)	Option 10 (UnBridge West of Mill, PedOvBridge at Station)	Option 11 (Improvements on Local Road Network, PedOvBridge at Station)
			1	Economy	Some comparative advantage over other options	Some comparative disadvantage over other options
		2	Integration	Significant comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative disadvantage over other options
		3	Environment	Some comparative disadvantage over other options	Some comparative advantage over other options	Significant comparative advantage over other options
		4	Accessibility and social inclusion	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
		5	Safety	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
		6	Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options
			Preferred Option	No	Yes	No

				<b>DART+ WEST - MCA Stage 2</b>		
				<b>Ashtown Level Crossing Assessment</b>		
	<b>Parameter</b>		<b>Criteria</b>	<b>Sub-Criteria (Quantitative/Qualitative)</b>	<b>Option 12 (Road OvBridge West from Navan Parkway Stn, PedCycOvBridge at Ashtown Station)</b>	<b>Option 13 (OvrBridge West of Mill, PedOvBridge at Station)</b>
					<p><b>Road link between Navan Parkway Station and the Road network immediately north of Ashtown Village incorporating a bridge over the railway and canal and a pedestrian cycle bridge over the station in Ashtown.</b> This option would entail re-routing through road traffic away from Ashtown village. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.9m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashton House.</p> <p>The option will provide for a set down, maintenance and emergency vehicular access to the station.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p>	<p><b>Road with cycleway under Railway and Canal West of the Mill and linking to Mill Lane at each end:</b> This option would entail re-routing Ashtown Road along its old alignment (pre railway) along a section of Mill Lane, diverting through commercial lands to the west of the protected mill and passing under both the railway and the Royal Canal to tie into Mill Lane north of the railway. The option is proposed to accommodate a cross section of a 6.5m carriageway with 1.5m rubbing strip to the West and a 3.65m cycleway to the east. An at-grade turning head and drop-off would be provided to the south of Ashtown Station and a set down area north of the canal.</p> <p>An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would rise to an approximate level of 52.5m OD Main Head over the railway which is at a level of 45.6m. A half through bridge form of construction would be required similar to the adjacent Ratsoath Road Bridge.</p> <p>A new mini roundabout is proposed at the junction of Mill Lane and Ashtown Road south of the railway to accommodate traffic interactions.</p> <p>It is proposed that pedestrians, cyclists and disabled users would be accommodated by the construction of a new pedestrian / cycle bridge on the footbridge of the existing train station. This will require reconstruction of the train station.</p> <p>This option crosses through the grounds of Ashton House and will require an additional bridge to be constructed over the access road to the house. It is anticipated the proposed roadway would be walled along the extent passing through the estate. The proposal is to tie into the existing roundabout immediately north of Ashtown village. A portion of the boundary wall to Ashton house would need to be demolished to accommodate the link road.</p> <p>This option would require some property acquisition.</p>
6	Physical Activity	6.1	Connectivity to adjoining cycling facilities	Analysis of the extent that the scheme connects with cycle tracks.	- <b>Comparable to other options</b>	- <b>Comparable to other options</b>
		6.2	Permeability and local access opportunity	Journey Time and lengths of diversions for active modes and numbers affected. Analysis of the connectivity between level crossing and green areas/key attractions related to active mode	- <b>Comparable to other options</b>	- <b>Comparable to other options</b>
			<b>Criteria</b>		<b>Option 12 (Road OvBridge West from Navan Parkway Stn, PedCycOvBridge at Ashtown Station)</b>	<b>Option 13 (OvrBridge West of Mill, PedOvBridge at Station)</b>
1			<b>Economy</b>		- Some comparative disadvantage over other options	- Some comparative disadvantage over other options
2			<b>Integration</b>		Significant comparative disadvantage over other options	Significant comparative advantage over other options
3			<b>Environment</b>		Some comparative disadvantage over other options	Significant comparative disadvantage over other options
4			<b>Accessibility and social inclusion</b>		Some comparative disadvantage over other options	Some comparative advantage over other options
5			<b>Safety</b>		Some comparative advantage over other options	Some comparative advantage over other options
6			<b>Physical Activity</b>		Comparable to other options	Comparable to other options
			<b>Preferred Option</b>		<b>No</b>	<b>No</b>